



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,547	10/24/2003	Yoshiyuki Sumitomo	103213-00060	7494

7590 10/11/2005

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC  
Suite 600  
1050 Connecticut Avenue, N.W.  
Washington, DC 20036-5339

EXAMINER

BRINSON, PATRICK F

ART UNIT PAPER NUMBER

3754

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

6

<b>Office Action Summary</b>	<b>Application No.</b> 10/691,547	<b>Applicant(s)</b> SUMITOMO, YOSHIYUKI	
	<b>Examiner</b> Patrick F. Brinson	<b>Art Unit</b> 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4,6,7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,044,844 to **Kwok et al.**

The patent to **Kwok et al.** discloses a hose (18), figs. 4-6, of which a cross-sectional shape is seen in a plane perpendicular to an axial direction is rectangular and having linear projections (42, 44, 46) formed on the inner wall of the hose body along the axial direction. Though not drawn to scale, fig. 5 best discloses a gap between a top of the linear projection and a part of the inner wall opposite the linear projection that appears to fall within the range of 25% to 30% of the distance from the part of the inner wall on which the linear projection is formed to the part opposite the projection, as recited in claims 1 and 6. A cross-sectional shape of each linear

projection as seen in a plane perpendicular to an axial direction is trapezoidal, as recited in claim 4. **Kwok et al.** is silent as to the specific distance of the gap between the top of the linear portion and a top part of the inner wall opposite the linear projection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to specifically set the range of the gap between the top of the projection and a part of the inner wall opposite the linear projection at 25% to 30%, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kwok et al.** in view of U.S. 4,867,485 to **Seckel**.

The patent to **Kwok et al.** discloses the recited structure, with the exception of disclosing the linear projections having a flat surface at the top. The patent to **Seckel** discloses a kink impeding hose including projections (20) formed in a trapezoidal cross-section and including flat surfaces (24). Absent any specific reasoning and/or advantage for the top of the projection being a particular shape, it would have been an obvious matter of design choice to form the tops of the projections of **Kwok et al.** with a flat surface, as suggested by **Seckel**, since applicant has not disclosed that the flat surface solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a rounded top, wherein the

function of the projections in either reference is to prevent the hose from occluding, which would prevent the fluid from traveling through the tube. There is no probative evidence that a flat top projection is critical to the invention. Applicants have the burden of proving such criticality.

4. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 4,257,422 to **Duncan**.

The patent to **Duncan** discloses a crush resistant fluid delivery hose having a substantially rectangular cross-section including projections (13 and 14) that are arranged such that their tops point toward each other. **Duncan**, like **Kwok et al.**, does not specifically disclose the distance of the gap between the tops of the projections. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the projections of **Kwok et al.** such that the gap between the opposing tops is in the range of 25% to 30%, more specifically 25% to 28% of the distance between parts of the inner wall on which the projections are formed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

### ***Response to Amendment***

5. Applicant argues that since the figures of the **Kwok** reference are not drawn to scale, and since the specification does not disclose any specific dimensions regarding

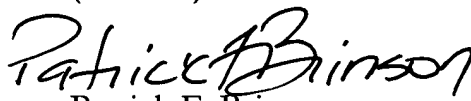
them, that any measurements of them cannot be used to reject the claims since each and every feature recited in the claims is not disclosed. Therefore the rejection has been withdrawn and an obvious type rejection has been made since it is clear from the figures that tops of the projections are indeed very close to the inner surface of the opposing wall, thus the gap between the top of the projection and the inner wall opposite the linear projection falls within a small percentage range. Since **Kwok** discloses the importance of providing the projections having their tops in a very close relationship to the opposite wall, it would be obvious to produce a flexible hose of rectangular cross section with projections that extend from one wall towards the other for preventing occlusion of the passageway with the gap between the projection top and the opposing wall specifically in the range of 25% to 30%, since it is known that discovering an optimum value of a result effective variable involves only routine skill in the art. Applicant has not provided any evidence that there is a patentable distinction between the recited 25% to 30% range gap than the gap shown by the **Kwok** reference. Likewise, the **Duncan** reference discloses the recited structure of opposing projections facing each other, but is silent as to the gap between the tops of each projection. Without the criticality and/or advantage of having the gap between the tops of the projections in the range of 25% to 30% of the inner walls from which they project being provided, it would be an obvious choice of design to specify such a

range for the gap between the two projections, wherein the structure is known in the art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (571) 272-4897. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Y. Mar** can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patrick F. Brinson  
Primary Examiner  
Art Unit 3754

P. F. Brinson  
October 4, 2005